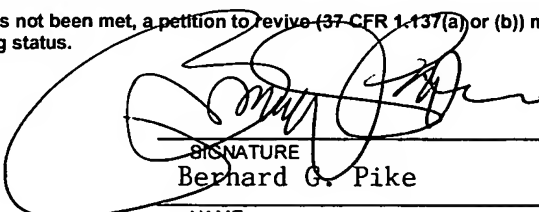


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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| TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371 | | ATTORNEY'S DOCKET NUMBER 020404PCTUS |
| INTERNATIONAL APPLICATION NO. PCT/US03/019532 | | U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/517897 |
| INTERNATIONAL FILING DATE June 20, 2003 | | PRIORITY DATE CLAIMED June 21, 2002 |
| TITLE OF INVENTION Color Tunable Photoluminescent Blends | | |
| APPLICANT(S) FOR DO/EO/US Christiane Lowe and Christoph Weder | | |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: | | |
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371. 3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. 4. <input type="checkbox"/> The US has been elected (Article 31). 5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> has been communicated by the International Bureau. c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto. b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4). 7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). | | |
| Items 11 to 20 below concern document(s) or information included: | | |
| <ol style="list-style-type: none"> 11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A preliminary amendment. 14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76. 15. <input type="checkbox"/> A substitute specification. 16. <input type="checkbox"/> A power of attorney and/or change of address letter. 17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825. 18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4). 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). 20. <input type="checkbox"/> Other items or information: | | |

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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|---|--------------|---|------------|---|----|
| U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/517897 | | INTERNATIONAL APPLICATION NO. PCT/US03/019532 | | ATTORNEY'S DOCKET NUMBER 020404PCTUS | |
| 21. The following fees are submitted: | | | | | |
| <input checked="" type="checkbox"/> a) Basic national fee..... \$300.00 | | | | \$ | |
| <input checked="" type="checkbox"/> b) Examination fee..... \$200.00 | | | | \$ | |
| <input checked="" type="checkbox"/> c) Search fee..... \$500.00 | | | | \$ | |
| TOTAL OF ABOVE CALCULATIONS = \$1000.00 | | | | \$ 1,000.00 | |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof. | | | | | |
| Total Sheets | Extra sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE | | |
| - 100 = | /50 = | | x \$250.00 | \$ | |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)). | | | | \$ | |
| CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | \$ | |
| Total claims | 27 - 20 = | 7 | x \$50.00 | \$ 350.00 | |
| Independent claims | 4 - 3 = | 1 | x \$200.00 | \$ 200.00 | |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable) | | | + \$360.00 | \$ | |
| TOTAL OF ABOVE CALCULATIONS = | | | | \$ 1,550.00 | |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2. | | | | \$ | |
| SUBTOTAL = | | | | \$ 775.00 | |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)). | | | | + | \$ |
| TOTAL NATIONAL FEE = | | | | \$ 775.00 | |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property | | | | + | \$ |
| TOTAL FEES ENCLOSED = | | | | \$ 775.00 | |
| | | | | Amount to be refunded: | \$ |
| | | | | Amount to be charged: | \$ |
| <p>a. <input checked="" type="checkbox"/> A check in the amount of \$ <u>775.00</u> to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>11-1110</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> | | | | | |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a)) or (b)) must be filed and granted to restore the International Application to pending status. | | | | | |
| SEND ALL CORRESPONDENCE TO: Bernard G. Pike, Esq. Kirkpatrick & Lockhart LLP Henry W. Oliver Building 535 Smithfield Street Pittsburgh, PA 15222-2312 | | | | | |
| | | | | SIGNATURE  | |
| | | | | NAME Bernard G. Pike | |
| | | | | NAME 46,993 | |
| | | | | REGISTRATION NUMBER | |

IN THE UNITED STATES RECEIVING OFFICE

In re application of :
Lowe et al. :
: Color Tunable Photoluminescent Blends
International Application No. :
PCT/US03/019532 :
: :
International Filing Date :
20 June 2003 :
Agent Docket No.
020404PCTUS

EXPRESS MAIL CERTIFICATE

Pittsburgh, Pennsylvania 15222
December 13, 2004

Mail Stop: PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

"Express Mail" label number ED249802475US

Date of Deposit December 13, 2004

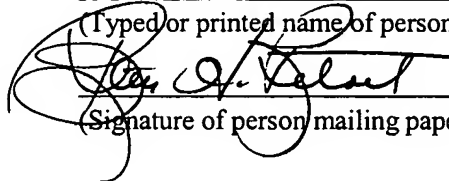
I hereby certify that the following attached paper(s) or fee:

- TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE CONCERNING A FILING UNDER 35
U.S.C. 371 (**In duplicate**);
- PRELIMINARY AMENDMENT
- SPECIFICATION
- COPY OF REPLY TO INVITATION TO PAY ADDITIONAL FEES IN
INTERNATIONAL APPLICATION
- INFORMATION DISCLOSURE STATEMENT, PTO Form SB/08A
- CHECK PAYABLE TO PTO

are being deposited with the United Postal Service "Express Mail Post Office to Addressee"
service under 37 CFR 1.10 on the date indicated above and is addressed to **Mail Stop: PCT,**
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Beth H. Retort

(Typed or printed name of person mailing paper or fee)



(Signature of person mailing paper or fee)

IN THE EUROPEAN PATENT OFFICE
AS INTERNATIONAL SEARCHING AUTHORITY

| | | | |
|---------------------------------|---|--------|-------------------------|
| In re Application of: | : | Title: | Color Tunable |
| Case Western Reserve University | : | | Photoluminescent Blends |
| International Application No.: | : | | |
| PCT/US03/19532 | : | | |
| International Filing Date: | : | | |
| 16 September 2003 | : | | |
| Agent's File Ref.: 020404PCT | : | | |

REPLY TO INVITATION TO PAY ADDITIONAL FEES
IN INTERNATIONAL APPLICATION

October 30, 2003

Via Facsimile 011 31 70 340 3016

European Patent Office
P.B. 5818 Patentlaan
NL-2280 HV Rijswijk
Authorized Officer: Vèronique Baillou

Examiner:

In response to the Invitation to Pay Additional Fees mailed 19
September 2003, Applicants do not wish to pay additional fees in the
above-referenced international application ("current application").

However, Applicants respectfully request reconsideration that there are
three inventions claimed in the subject application and request that the search be
carried out on all claims of the current application. The Examiner indicates that the
three subject matters involved in the current application are a photoluminescent
material comprising a host material and one color tunable photoluminescent dye
together with the article made therefrom, a photoluminescent dye of a given formula,
and a method of determining the degree of change on a photoluminescent system

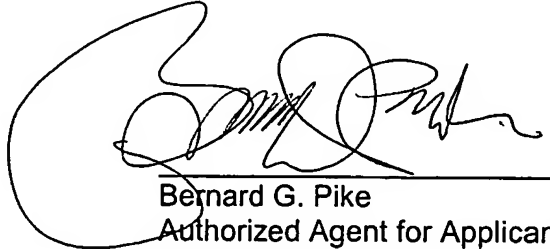
due to mechanical deformation, temperature, pressure, exposure to a chemical and aging. In the Examiner's opinion, the link between the three forming a single general inventive concept is the photoluminescent dye. The Authorized Officer then concludes that since the polymeric form of the dye is known from the document United States Patent No. 6,127,693 (the '693 patent), the link is not novel and thus the current application lacks unity of invention.

Applicants disagree. Applicants agree that poly(phenylenevinylenes) ("PPV") exist in the prior art and have stated so in the background section of the current application. However, a polymeric PPV may not be used to destroy the novelty of a nonpolymeric photoluminescent dye compound. For instance, the polymeric structures of the '693 compound may comprise molecular weights of hundreds of times greater than the photoluminescent dyes of the current application. It is difficult to understand how a polymer can anticipate the photoluminescent dyes of the current invention.

The polymers of the '693 patent are electroluminescent for use in organic light emitting diodes. It is also clear that the disclosure of the '693 patent does not even consider use of non-polymeric materials and it is extremely doubtful that non-polymeric compounds would be functional in the invention of the '693 patent. Conversely, the polymeric structures of the '693 patent may not function in the invention of the current invention since polymers of too high of a molecular weight would lack mobility in the host material. Certainly, the disclosure of the '693 patent contemplates use of a blend of polymers to emit only a specific emission spectrum.

Applicants' lack of payment and arguments do not constitute an admission that the Applicants agree with the Authorized Officers' determination of lack of unity of invention.

Respectfully submitted,



Bernard G. Pike
Authorized Agent for Applicants

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